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New Archaeoastronomical Results from Rapa Nui

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In the Winter 1987-88 issue of *Rapa Nui Notes*, I presented evidence that lead me to the conclusion that on Easter Island at least some half-dozen *ahu* had been intentionally oriented such that their *moai* faced the rising or setting solstitial or equinoctial sun. These included the five platforms at Englert's three most outstanding *ahu*: Tongariki, Vinapu, and Heki'i. Most convincing of all, however, was *Ahu Huri A Urenga* where at least nine independent lines of evidence made it virtually certain that this small one-*moai ahu* had been designed to be used astronomically.

Since early 1988 the case for astronomy has been supported by far stronger statistical evidence, thanks in part to the survey of the orientations of some 272 coastal *ahu* that William Mulloy made in 1962. One thing that his data clearly showed had been obvious for years: that the great majority of these coastal *ahu*--roughly 90 percent--were situated with the long axes parallel to the adjacent shoreline. Indeed, on some of the aerial survey maps made by the Chilean Air Force, the *ahu* look almost like a picket fence strung out along the coast.

However, my interest was drawn to the 23 coastal *ahu* whose long axes were significantly skewed to the shoreline. Why were they oriented differently? The answer given by Mulloy's data (and checked by my own measurements) was that almost a third of them--seven--were oriented such that perpendiculars to their major axes or principal facades pointed within 1.9 degrees of the direction due east-west; i.e., the platforms were accurately aligned north-south. Statistics say that for this to happen by chance is extremely unlikely; the odds are approximately the same as rolling a single die six times and having the same number come up every time. Most, perhaps all, of these *ahu* must have been intentionally oriented in this way.

Another set of *ahu* that attracted my attention were those located well inland--more than a kilometer from the coast. With no shoreline nearby, what influenced the *Rapanui* builders in their selection of an orientation? Again, an astronomical direction is indicated, this time towards that of the rising sun at winter solstice, the shortest day of the year:

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Rapanui Group Photo Dated August 1873

Steven Roger Fischer, Ph.D.

With the present advent of photohistoriography, great interest has arisen throughout the world in "earliest-knowns"--that is, the first photographic documentations we possess treating of every spot under the sun. Although no one as yet has effected a study on the history of the photographic documentation of Rapanui, a great number of such early photographs are known from a variety of scientific and popular publications; many more lie in archives, awaiting discovery.

The very earliest known photographs having anything to do with Rapanui appear to be those taken on board H.M.S. *Topaze* during her 1868 transport of the Orongo statue "Hoa-Haka-Nana-Ia" (incorrectly dated by Alazard, where these photographs appear in his edition of Roussel 1926:496f., to the 1911 *Challenger* visit).

The earliest known photographs of Rapanui themselves are apparently those taken by the Pape'ete, Tahiti, photographer C.B. Hoare in August of 1873, on instigation of the resident American merchant Thomas Croft. These unpublished photographs are today to be found in the archives of the *Padri dei Sacri Cuori*, Casa Generalizia, Via Rivarone 85, I-00166 Rome, Italy.

Among these several photographs is one that could well be the earliest Rapanui group photograph in existence, and thus of inestimable significance to the Rapanui people of today.

On the back of the original photograph is written: "tiré le 28 Août 1873. Au lieu du P. Joseph on a mis un drôle de type dans les annales de la Prop. de la foi" ("taken 28 August 1873. Instead of Father Joseph one used a comical figure in the *Annales de la Propagation de la Foi*. For Reverend Father Idelfonse [Alazard]"). A different hand also notes *Indigènes de l'Ile de Pâques avec le R.P. Georges Eich et le Fr. Théodule Escolan. Congrég. SS. Coeurs Picpus 1873" (Natives of Easter Island with Reverend Father George Eich and Brother Théodule Escolan. Congrégation des Sacrés-Coeurs de Picpus 1873").

This original photograph was later used as a model for a rather dubious sketch published in the *Annales de la Propagation de la Foi* which curiously metamorphosed the bearded European into a Rapanui patriarch, omitted other persons, and altered gestures and objects. No less erroneous,

however, are these handwritten notes themselves. For there exists important source material which allows a more precise interpretation.

At the 6 July 1874 regular meeting of the California Academy of Sciences, San Francisco, the President, Professor George Davidson, donated a series of twenty-five photographs from Pape'ete, Tahiti, dealing mostly with the inscribed tablets of Rapanui, but including as well a number reproducing Rapanui themselves, as the accompanying letter from Thomas Croft, dated 30 April 1874, explains. The group photograph we present here is clearly Croft's Nr.23 (Croft 1875:323):

"No. 23 is a photograph taken at the request of the Bishop, some time since. I have procured two copies to send to you, because it is interesting. The gray-bearded priest in the center is one of two priests who were formerly on Easter Island, and who are accused by a portion of the islanders of causing that act of vandalism, the destruction of a great many of the records. On each side of him stand the two husbands of the two women, and the fathers of the two small children, whose mothers hold them in their arms.... In No. 23 you may see, in the hands of another priest, one of the blocks from which I have had two of the photographs taken. You may also see in the hands and on the persons of different natives, some of the idols, paddles, and implements used by the heathen priests in their worship.... I have presented to the Bishop, in your name, a copy of each of the photographs, as some compensation to him for his kindness and trouble."

Croft retained a copy of each of the photographs for himself, and presented to Monseigneur Jaussen, "for his kindness and trouble," also a copy of each; the photographer Hoare retained the negatives in Pape'ete; and San Francisco received fifty-two photographs in duplicate, of which two had already been publicly presented on 17 November 1873 (Cecil 1990). All this for the photographer's fee of American \$75, or some \$3 per photograph, a rather handsome sum in 1874.

Churchill (1912:317) writes how he tried, "a dozen years after the date of this correspondence" (thus 1886), to secure a set of these same photographs for himself; but no one in Pape'ete knew where the negatives were: "The Lord Bishop of Axière, Mgr. Tepano Jaussen, had a set of the plates in his own library and had sent sets to various scientific bodies, but

to only a few, for the temporalities of a missionary bishop are but slight. The California Academy of Sciences lost all its collections in the destruction of the city." This latter fact was recently confirmed to me by Charles L. Cecil (1990), Department of Anthropology, California Academy of Sciences, San Francisco.

Of these undescribed photographs, only Mgr. Jaussen's has apparently survived, for it was included within the pages of his 1886 handwritten manuscript "Ecriture Kyriologique, Empire Maori" (also in the SS.CC. archives, Rome; excellent descriptions by Barthel 1958:169-173) but has since been removed from this volume and stored separately.

The identity of any of the assembled Rapanui is unknown; perhaps the names are marked on the back of the original individual portraits, also in the SS.CC. archives, Rome. Croft (1875:323) merely mentions them as being "in the employ of the mission here"; that is, each is in immediate service to Mgr. Jaussen in Pape'ete. They most likely all would have arrived two years earlier, in 1871, when a great number of Rapanui either left to work Brander's Tahitian plantations or accompanied Father Roussel to Mangareva (it is doubtful whether they were among those very few who arrived in Pape'ete in 1863 as survivors from the 1862/1863 international raids).

The priest on the left of the photograph is, as we know from the collection of his (unpublished) photographs in the SS.CC. archives, the German Father Georg "Joseph" Eich. Born 17 May 1845 in Kärlich by Koblenz, he joined the Congrégation des Sacrés-Coeurs in 1864 and came to Tahiti in 1867, where he was ordained in 1869 (*Biblioteca Missionum*, Vol.21 [1955]:221); according to Hoorebeek (1979:88), Eich arrived from Valparaíso on the *Hermann* by way of Rapanui, where he is said to have stopped in February/March 1868. Eich became founder of the Cook Islands mission and authored many articles (cf. the bibliography in the *Bibliotheca Missionum*, Vol.21[1955]:221). In 1904, he was appointed Coadjutor to Mgr. Jaussen's successor Mgr. Verdier in Tahiti; but he declined, due to ill health. He died 6 March 1905 in Pape'ete. In the 1873 photograph, Father Joseph is twenty-eight years of age.

The identification of the other priest is problematical. Croft (1875:323) tells us he is "one of two priests who were formerly on Easter Island." There had been up to this time



The earliest known group photograph: 28 August 1873, at the Pape'ete, Tahiti, residence of Monseigneur Tepano Jaussen, Bishop of Axière: Twelve Rapanui, eight in the employ of Mgr. Jaussen; left, the German Father Georg "Joseph" Eich holding the rongorongo tablet "Keiti"; center, Father Hippolyte Roussel (?); in the window, Mgr. Jaussen (?). [Reproduced by special permission of the SS.CC., Rome.]

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only two actual priests serving on Rapanui--Roussel and Zumbohm--as well as two lay brothers--Eyraud and Escolan. Eyraud had died on Rapanui five years and nine days before this 28 August 1873 photograph. Escolan, in 1873, was still a young man (hence, the confusion here in the "identification" in the second handwritten note on the back of this original photograph, with "Eich" mistakenly identified as the central figure and "Escolan" as the young man on the left [i.e., Eich]). This leaves only Roussel or Zumbohm as the bearded priest in the center.

The German Gaspard Theodor Zumbohm, born 7 April 1823 in Südkirchen by Münster (erroneously as "Ludwirchen" in the *Biblioteca Missionum*, Vol.21 [1955]:202), arrived on Rapanui on 6 November 1866 with Escolan. He caused great friction among the other three missionaries on the island, owing to his dictatorial manner. Taking deathly ill, he finally quit the Rapanui mission for Callao on the *Chanticleer* "towards the end of 1870" (Zumbohm 1880:634), later moving to the convent of Santa Rosa, Santiago, Chile. He died in Quito, Ecuador, on 21 August 1887. There is no mention of Zumbohm ever having visited Mgr. Jaussen's Tahitian mission following his quitting Rapanui in 1870. At the time of this 1873 photograph, Zumbohm was fifty years old, which could indeed be the age of the bearded priest in the center. But in the only known sketch of Zumbohm (Roussel 1926:425) at about age thirty, we see a handsome beardless man whose facial features bear no similarity at all to the priest in this 1875 photograph.

Perhaps the priest in the center is Roussel himself, of whom to date no portraits are known to exist. Born 2 March 1824 according to the *Biblioteca Missionum*, Vol.21 [1955]:203--the *Annales des Sacrés-Coeurs*, NS, Vol.5 (1898):269 claims 22 March 1824--in La Ferté-Macé (Bishopric Orne), France, of an influential family, Hippolyte Basile Roussel was educated in Louvain and Paris--having joined the Congrégation des Sacrés-Coeurs in 1844--until 1849, when he became a teacher at Pointiers (the *Biblioteca Missionum*, Vol.21 [1955]:203 claims he was ordained at this time). Five years later he left for the Marquesas; in 1865, he was evangelizing in the Gambiers and Tuamotus under great personal danger, relocating his mission from the latter onto Mangareva in the Gambiers. Joining returning Brother Eugène Eyraud, Roussel arrived on Rapanui on 25 March 1866 (*Annales SS.CC.*, NS, Vol.5 [1898]:271; Hoorebeeck 1949:88 claims 29 March) in an attempt to establish the island's first permanent mission. But he left again with Brother Théodule Escolan and "les cent et quelques indiens" (Roussel, unpublished private letter to Mgr. Jaussen, of 23 June 1871, in the SS.CC. archives, Rome), when Dutrou Bornier's threats took on fatal dimensions, on 6 June 1871 (Hoorebeeck 1979:89). After further evangelization on Reao, Tatakoto, and Pukarua in the Tuamotus, he settled in Rikitea on Mangareva (Gambiers). Here Father Hippolyte Roussel died on 25 January 1898.

In August 1873, Roussel was forty-nine years of age, which also could perhaps be the age of the central priest in the photograph. There is no firm proof that this is, in fact, Roussel. But the evidence seems to point in this direction. We also know that Roussel, in the 1870s, paid many visits to Mgr. Jaussen in Pape'ete. If this is Roussel, then it is the only known likeness of him known to exist.

An alternative explanation, of course, is that Croft was mistaken, and that the old priest in the center is none of the above persons.

A cleric with receding hairline, in rocher and mantelletta and with a crucifix--the ecclesiastical vestments of a Roman Catholic bishop--is looking out of the window at the upper left of the photograph. A further 1873 photograph also in the SS.CC. archives gives us reason to believe that this is Monseigneur Tepano Jaussen himself, Apostolic Vicar of Tahiti and Bishop of Axière, who, according to Croft (1875:323), was the one who personally requested that this particular photograph be taken; it is at Jaussen's own house in Pape'ete that the photograph is being done.

Florentin Etienne ("Tepano" in Tahitian) Jaussen was born on 12 April 1815 in Rocles, Ardèche (Franceschini 1954:353 claims he was born in Périer, Ardèche), was ordained in 1840 and he joined the Congrégation des Sacrés-Coeurs in 1845, leaving for the Chile mission the same year. In 1848, he was appointed the first Apostolic Vicar of Tahiti, as Titular Bishop of Axiéri, arriving in Papeete in 1849 and remaining there--a veritable giant of a figure in the Tahitian history of the latter half of the 19th century--until his death on 9 September 1891, after having spent the last years of his life "attempting to pierce the ethnographic mystery of Easter Island" (Franceschini 1954:354).

Croft tells us (1875:323) that "another priest" (i.e., Eich) is holding "one of the blocks," meaning with this one of the several original Rapanui inscribed *rongorongo* tablets in Mgr. Jaussen's personal possession. It is not at all difficult to tell which tablet this is, for among Jaussen's tablets only "Keiti" has this form, the tablet destroyed by the Germans in the siege of Louvain in 1914. Here we see Father Joseph (himself a German) holding up the obverse ("upside down" according to our modern reading of this artifact). Since this photograph was taken before Mr. Hoare's later series of tablet photographs (cf. Croft 1875:320: "some time since"), it would not only be the first photograph ever made of "Keiti", but also one of the earliest photographs of any of the original *rongorongo* tablets.

As we hear from Croft (1875:320) that "the Bishop has also been trying his hand in translating the inscriptions" and had, by the 30 April 1874 letter, already completed "a manuscript book of considerable thickness" on the subject, together, as we know from Jaussen's own publications, with Metoro--"a native of Easter Island now in the employ of the mission" (see Croft 1875:320)--it is entirely possible that Mgr. Jaussen's own work on *rongorongo* was taking place at the same time that he had Croft organize this photographic

sitting on 28 August 1873 (one will notice the prominence given the tablet "Keiti" in the photo), and that among the photographed Rapanui "in the employ of the mission here" (Croft 1875:323) one of them could actually be Metoro himself. Indeed, together with Croft's letter of 30 April 1875, this photograph of 28 August 1873 allows us to date Mgr. Jaussen's active interest in things Rapanui with far more precision than hitherto possible.

Of considerable interest are also the objects that the Rapanui themselves are displaying, all original Rapanui artifacts from Mgr. Jaussen's personal collection. (Perhaps this was one of the reasons why the photo, unlike others, was taken at the Bishop's residence rather than at Mr. Hoare's photographic atelier.) We can identify the same objects from later published illustrations. In Jaussen 1893a:246, fig.2 (1893b:8, fig.2) we find a sketch, after an unpublished Hoare photograph also in the SS.CC. archives, likely from 1873/1874 as well (though not described by Croft 1875:322f.), of the same *rapa*, *ua*, and left *rei miro* (one head missing). In Alazard's edition of Roussel 1926:465, we have a photograph of the Jaussen Collection as was then found in the SS.CC. Museum in their Masion-Mère at Braine-le-Comte, Belgium, with Nr. 25 perhaps the same *moai kavakava* (also with genitals covered), Nr. 23 the same *ua*, and Nr. 3 the same *rapa* (both *rei miro* of 1873 are not illustrated). From the same museum we find by Ropiteau 1935:fig.1 perhaps the same *moai kavakava* again; fig.4 the same "headless" *rei miro*; with the *rapa* described on p.521 and the *ua* on p. 522.

All these objects seen in the 1873 photograph, then still in Mgr. Jaussen's private collection in Pape'ete, were taken in 1888 and in 1892 to the "Maison-Mère de Pères des Sacrés-Coeurs de Picpus" on the Rue de Picpus, Paris. In 1905, the Jaussen Collection, together with the Maison-Mère, was transferred to the new headquarters at Braine-le-Comte, Belgium. In 1953, the Congrégation des Sacrés-Coeurs moved to the Villa Senni in Grottaferrata, Italy; in 1964, the "Padri dei Sacri Cuori" transferred to the Via Aurelia Antica, Rome, and in 1974 their "Casa Generalizia" became established in the modern, multi-storied building at Via Rivarone 85, Rome.

Some of the choicest Rapanui artifacts from the Jaussen Collection (including the *rongo* tablet "Echancrée", the first to be discovered) were removed in 1975 to the Musée de Tahiti et les Iles, in Tahiti, where they are to be found today.

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six of thirty *ahu* that I was able to find and measure are so oriented. The statistics say that the probability of this occurring is about the same as that of rolling a single die four times and having the same number come up every time. The best example; Ahu Huri A Urenga already mentioned above whose *moai* looks straight at the rising June solstice sun.

Of course, one or two of each group may have been oriented just by chance in these special directions, but most of these *ahu*, at least ten or twelve, must have been intentionally put as they were. One possible explanation for this bi-directional mode of orientation (solstitially inland, equinoctially along the coast) is that the inland folk were vitally interested in the seasons; they were involved in farming and needed to note carefully the growing seasons. The coastal dwellers, on the other hand, were more concerned with the cardinal directions since many were fishermen and some perhaps even dreamed of someday

sailing away to other isles. (Who knows how many tried and failed.) The imposing and beautifully preserved Ahu A Tanga set perpendicularly to a sea cliff near the north point of Rapa Nui is the best example: its long axis is aimed a scant 0.3 degrees to the left of due north.

Special mention should be made of three newly-investigated *ahu* which have some intriguing characteristics. The first, located by the shore SSW of Rano Raraku, is known by two names; Ahu Puna Kape and Ahu Maihiku (Site 13-130 in the *Atlas Arqueológico*). The *Atlas* shows the main platform as somewhat irregular in shape, but generally lying parallel to the nearby shoreline. The curious and



Ahu A Tanga on the northernmost point of the Island

apparently unique feature of this *ahu* is a long, slightly-raised mound outlined by stones and directed perpendicularly to the main platform. Its dimensions: 47 meters long, about 25 cm high, and 4 tapering to 3 meters wide. Near its center is what appears to be the torso of a small *moai* and nearby lies what seems to be its head, both made of Rano Raraku tuff. Mulloy suggests that this low platform was, in fact, another *ahu*.

What first interested me was the orientation of the central axis of this strange structure: it lies nearly perpendicular to the nearby shoreline, and is directed toward a bearing of 359.0 degrees, just one degree to the left of due north. Other intriguing facts became apparent: On the day of the summer solstice around A.D. 1500, as seen from the *ahu*, the left rim of the sun just skimmed along the edge of the Rano Kau cliff. Then on the day of the equinox, the sun set--and still sets--directly behind the left-hand peak of prominent Maunga Otu'u just over 8 kilometers away. It would have made an almost perfect foresight: the sun would have been at most 0.1 degrees to the right of center. And finally, another sizeable *ahu*, Moai Tu'u Tahi (12-103) 650 meters away with a single very tall (6 meters) but now prostrate *moai*, would have been just on line with the setting winter solstice sun.

In summary, the directions of two prominent natural features, the Rano Kau cliff and Maunga Otu'u, and to Ahu Moai Tu'u Tahi, plus the orientation of the curious low platform provide good reasons to believe that Ahu Puna Kape served as an astronomical observatory. This is not to say that the *ahu* was not primarily religious or ceremonial in

nature, but ample evidence suggests that it served several astronomical purposes.

The other two newly-investigated *ahu* might be considered a pair although they are about as far apart as any two *ahu* can be. They are both located beside important craters, Rano Kau in the southeast and Pua Katiki at the top of the peak on the Poike peninsula. The first *ahu*, listed as 1-52 in the *Atlas*, is on a knoll close to the northwest rim of Rano Kau, and its location is such that a thousand years ago the winter solstice sun would have risen at 1.5 degrees to the left of the now tree-filled Pua Katiki crater. More specifically, it would have risen directly over Maunga Vai A Heva, the right hand most of the three *tetitas* north of Pua Katiki. The *ahu* itself is not much to look at, consisting of three (originally four) vertically set stones slightly less than a meter high. McCoy calls it an "upright slab" *ahu* and suggests that it is typical of the very earliest shrines built on Rapa Nui. As best as I could determine, a perpendicular to its front (east) alignment is aimed 3.5 degrees to the right of due east.

The other *ahu*, No.16 in Ramon Campbell's listing of inland *ahu*, is an upright slab *ahu* consisting of four vertical stones in a row. The slabs are about the same height as those of 1-52 and in fact, the overall appearances of the two structures are strikingly similar. My best estimate of the bearing of a perpendicular to its west facade is 244.9 degrees which is a mere 0.2 degrees to the left of the direction to 1-52 and about a degree to the right of the sun as it set behind Rano Kau at the summer solstice.

Although a strong case cannot be made for the astronomical significance of these two *ahu*, one can easily imagine that the solstitial settings of the sun had much to do with the locations and orientations of these two, presumably ancient upright slab *ahu*. As Malcolm Clark has noted (See RNJ, Spring 1989), the solstitial orientation of the line connecting Rano Kau and Pua Katiki must have been appreciated by the early Islanders. It seems highly likely that they regarded this alignment as god-given and built temples to mark this remarkable orientation. If I had been with Hotu Matu'a when he first arrived on Rapa Nui, that would have been my suggestion.

Finally, a few words about Ahu A Kivi, the spectacular shrine with seven *moai* magnificently restored by Mulloy and Gonzalo Figueroa. Located well inland, it is oriented such that its *moai* stare 3.65 degrees to the left of due west and the direction to the setting equinoctial sun. Was it meant to be that way? Or did the builders mis-calculate the *ahu* orientation? Mulloy suggests that the builders were more interested in the equinoctial sunrise over the hills to the east; that occurred 1.8 degrees from the direction perpendicular to the platform wall. But isn't it strange to have the *moai* looking west when the sun rose in the east? Apparently not, that is also the case at Vinapu, Tongariki and Heki'i.

To summarize: By latest count, it seems that somewhere between 15 and 20 *rapanui ahu* were intentionally oriented or positioned such that they could be used to note important

directions like those of the rising and setting solstices and equinoxes, and the north-south direction. We do not know the names of all these *ahu* since statistical evidence provides us mainly with numbers. However, the five platforms found at Vinapu, Heki'i, and Tongariki still remain as likely candidates. Ahu Puna Kape and Ahu A Tanga would seem to be two additional monuments where astronomical directions were intentionally indicated. And lastly, there is Ahu Huri A Urenga, a virtually certain pre-historic solar observatory built with an impressive degree of precision and level of sophistication.

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Motu Nui Revisited.....

Few visitors to Rapa Nui have braved the swift current and rocky cliffs to reach the tiny islet of Motu Nui that measures a scant 1.5 hectares and lies 3 kilometers off the southwest corner of the island. Motu Nui is famed for its role in the birdman ceremony; it is said that participants (*hopu*) chanted and prayed for success while awaiting the birds. The caves in which they waited contain many unusual carvings and paintings. Métraux (1971:336) reports the *hopu* were provided with food from Orongo that was taken to the islet by servants using reed floats but should the weather turned stormy, those on the islet were stranded and had to resort to dried banana and potato skins.

The main difficulty in visiting Motu Nui revolves around the fact that there is no place to land or to tie up a boat, thus visitors to the islet must leap from a small fishing boat

that is surging in the surf onto wet and slippery rocks. The islet lacks water so all supplies must be brought along, even if visiting for only one day: if the sea becomes rough, one can easily be marooned out there until things calm down again.

In 1968, McCoy (1978) recorded and mapped twenty shelters on Motu Nui; in 1983, a re-survey (Cristino and Edwards 1984) uncovered 34 archaeological features (including 21 caves, eight of which contain rock art). They also found a previously unknown *ahu*-like platform with a crematorium. An early date of A.D. 1174 was obtained from this platform. What is unusual is that fragments of Rano Raraku tuff were noted in the structure, indicating that a statue was likely present at one time. *Paenga* were observed at one of the cave entrances; these carved stones are of the type that was used for house foundations. The islanders obviously were ferrying substantial loads out to the islet.

As *ahu* were associated with lineages, the finding of a ceremonial shrine presents a problem in light of the ethnographic data which states that the island was divided between the eastern and the western tribes. But the early date of A.D. 1174 suggests that the shrine may not have been in use by the time the bird cult was at its height; settlement-period shrines such as this were not subsequently rebuilt like many in the permanently occupied coastal areas. Given the importance of the source of birds and eggs from the time of first colonization, the presence of an archaic shrine on Motu Nui that was linked to fowling is not surprising (McCoy, personal communication 1983). The presence of *hare paenga*, however, presents a further problem as these structures are believed to be a late feature. Clearly, we have much to learn about this small islet and its function in the prehistoric society.

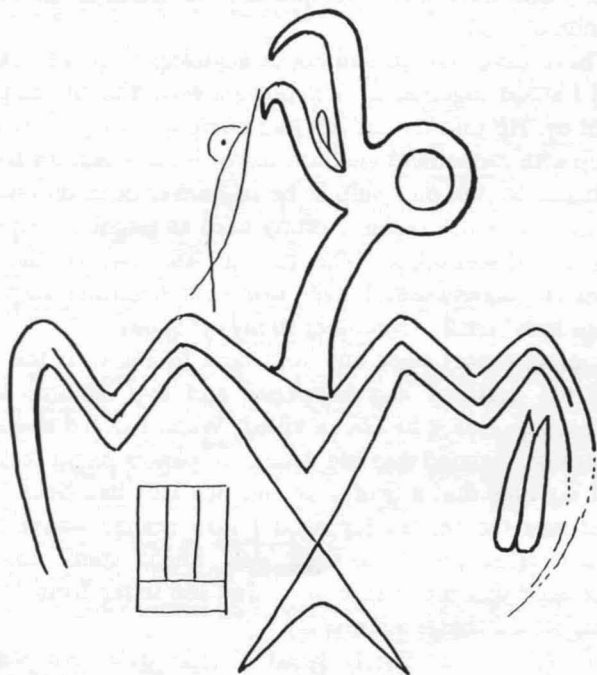


Excavation of Motu Nui's *ahu* in 1982 by the Universidad de Chile team. Photo: Marilyn Garrett.

Last fall (1990), further field work was conducted on Motu Nui by Claudio Cristino and Edmundo Edwards, who were assisted by several crew members. Their visit to the island was prompted by a fire that was set on the island by a local fisherman; the burning off of the grass cover revealed foundation stones which were noted by Felipe Teao. Upon

his report, Cristino and Edwards organized a brief study of these and other features on the tiny islet. Excavations were made in the doorway of one cave and other excavations were conducted around some of the other caves. On the flat east end of the islet, six boat house foundations were recorded and some excavations made to acquire datable materials. The boat house foundations were constructed of *keho*, basaltic slabs from Rano Kau.

Motu Nui's caves with rock art vary from overhang shelters to deep caves with long entrance passageways; in the case of the latter, the interiors are in almost total darkness. The total number of rock art elements recorded (Lee 1986:199) on Motu Nui is 179. Carved frigate birds were observed in several caves, some with traces of red pigment in the grooves. Other motifs include a *rei-miro*, Makemake faces, a canoe, cupules, and other designs. Only one birdman figure was found (this is in contrast to the numbers of them at Orongo: 395) and it is a poorly made example.



Frigate bird petroglyph from a Motu Nui Cave. Note *komari* (vulva form) under the right wing.

The most outstanding designs are two painted faces, one of which is a bas-relief petroglyph covered with red and yellow paint. The other is on the ceiling and is in red, yellow and black paint. The paintings indicate that there must have been considerable expertise in this medium.

In 1983, we noted that some of Motu Nui's rock art appeared to have been deliberately vandalized: two anthropomorphic figures (on exterior rocks) were broken and battered as if attempts had been made to obliterate them. The visit by Cristino and Edwards last year revealed that many of the carvings and paintings inside one cave have

been deliberately destroyed by islanders who have scraped them with knives.

Various early legends describe Motu Nui as either the first place sighted or the landing place of the original discoverers of the island (Thomson 1891:226; Métraux 1971:60). McCoy (1978:195) recognizes the difficulty with the "landing place" story because of its dangerous cliffs and lack of landing place whereas less than a mile away are good landing sites. Perhaps the legend became garbled over time or was elaborated upon in order to legitimize a claim to possession.

Further research and absolute dates will hopefully increase our knowledge of this tiny islet of Motu Nui which played such a vital role in the Rapanui society. However, the rate at which the rock art is disappearing due to human impact makes the survival of the art questionable.

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Letters and Responses.....

From: Emily Ross Mulloy, Laramie, WY

Dear Editor,

About a year ago you printed a letter to the editor (RNJ Vol.3, No.4) which stated, among other incorrect statements, the following: "...in a hundred years there has not been a single Chilean who knew Rapa Nui. Easter Islanders who know their language are not teachers and mainlanders who are teachers don't know Rapa Nui and will never learn it."

I have been waiting for someone to respond to this letter citing some of the facts which contradict these statements, but so far none has appeared in the Journal. It may, therefore, be appropriate to take note of a previously well-known island resident, who not only was a Chilean, a teacher, and spoke Rapanui but whose life and death are (literally) memorialized in song and story!

There must be many other people on the island and the mainland who knew Professor Baeza and could add to the information in the enclosed memoir. I would be glad to have further information or correction of any misstatements of mine, which are, of course, based on second-hand information from over 35 years ago.

Kau Kau Poki: A tragedy at Anakena by Emily Ross Mulloy

In early December 1955, I received a radiogram from my husband, William Mulloy, then a member of the Norwegian Expedition to Easter Island, which read as follows: REGARDLESS NEWS YOU MAY RECEIVE ALL EXPEDITION MEMBERS OK. Since we had received no news of any kind this message was not very reassuring, but I replied by radiogram asking for clarification and requesting more information but heard nothing further from Bill. Within a few days I did get an airmail letter from a law firm in Oslo, stating: "I have today received a telegraphic report to all relatives of the members of Thor Heyerdahl's expedition, reading as follows: "Common report. Everything all right with all participants. The expedition at Easter Island."

Fuller explanation of these rather cryptic messages had to wait until early March 1956, when we received a number of letters all at once from Bill. These had been written over the previous several months but could not be mailed until the annual supply ship *Pinto* returned to mainland Chile after its voyage to the island in January. The relevant passages from Bill's undated letter follow.

"Today I'll tell you all about the accident at Anakena that happened a few days ago. This was the cause of the cablegram I sent you telling you that we are all right. I received your answer indicating your puzzlement but for reasons I'll tell you when I get home I could not get out any other information. Thor has told me that he has had a letter dispatched from Oslo giving all the explanation and you have had that by the time this reaches you. Anyway what happened was this as far as I know. There are about 70 school children of all ages here on the island [1]. As the end of the term was approaching Father Sebastian got the idea that a grand finale would be to have our ship take the kids around the island from Hangaroa to Anakena which is where our camp is, for a picnic. The ship's captain agreed and all the kids were just crazy with joy as none of them had ever been on a large boat before. They were up all night before, waiting, and were at the shore at 4:00 A.M. waiting. It was the biggest day in their lives. My crew and I saw them go by from Vinapu and waved at them.

That night Ed Ferdon and I were in our room at Mataverí and a rider came in from across the island with a garbled story about a boat sinking and a lot of children being killed. The story spread through the village and everybody just about went crazy. A lot of people who had kids on board started out for Anakena on horseback while others just waited. The 2nd in command here, Teniente de Pix, had two children aboard and another officer, Capitán Ameau, had another two. They took off for Anakena in the jeep and Ed and I stayed to give what comfort we could to Sra. de Pix and Sra. Ameau. It was the most harrowing evening I ever spent in my life. About midnight the jeep came back loaded to the gills with kids. We spent the rest of the night bringing jeep loads of kids back from Anakena.

The story as we finally got it was this: The ship launch had been coming ashore at Anakena [2] in a heavy sea with 40 kids aboard. God knows why they put so many in the launch. About a quarter of a mile from shore for what reason nobody knows, the kids suddenly as one, moved toward the bow. The bow swamped and the launch turned over. The kids were all in the water. The Rapa Nui kids could all swim like fish [3] but the sea was too heavy for them. The de Pix and Ameau kids could not swim. The Norwegians on board acted quickly and in a very heroic manner. All not actually engaged in the management of the ship jumped overboard and swam what must have been at least a quarter of a mile to the scene of the accident. A number of natives swam out from shore. In the end all the kids were gotten ashore. Twelve had to be given artificial respiration. It wound up with the Chilean school teacher and two kids dead. One of the kids was the daughter of the alcalde and I knew her very well. The other was the son of Andrés Pakomio who is actually a cousin of mine (I have been adopted into his family and have a full complement of relatives including a grandmother.)

I have never felt so bad about anything in my life. Andrés and I stood together at Vinapu and waved to the ship as it went by. He told me his son had been up all night unable to sleep with excitement and how happy he was that his son had a chance to ride on a ship as he had never been on one. The whole family has taken it pretty hard as might be expected, and are disconsolate. The funeral was one of the most beautiful ceremonies I ever saw with haunting Rapa Nui songs that I shall remember to my dying day.

A news report went out from here by radio to the effect that the accident had happened and two children and a Chilean professor had been killed. When I heard about that I was very worried that the American papers might pick it up and say only that a professor and two kids had been killed. That was the reason for what I now realize was a rather cryptic telegram. I thought you might think that the 'professor' was me. I sure hope that the letter from Norway straightened things out quickly."

In 1959-61 our family spent a little over two years in continental Chile and on Easter Island. In both places we were in close contact with islanders, as well as Chileans who had been on the island during 1955-56. We met several relatives of the two children who had drowned, as well as a number of people who had been associated with the school teacher, Profesor Lorenzo Baeza, ("profesor" or "profesora" is the title used for any level of school teacher in Chile) either as former pupils or as simply fellow members of the small island community. All agreed that he had been interested in the Rapa Nui people, their language and culture, and that he did speak the language, at least well enough to be able to communicate with the children, most of whom, in that era, entered school speaking only Rapa Nui. The other thing all agreed upon was that he had given his life to save the children. His final words of encouragement "*kau*

kau poka" (swim, children, swim) to the small children struggling in the water, became the words of a song, a sort of slow, sad, tango-like melody describing the incident. This was a quite popular song at parties on the island during our stay in 1960.

The question in other recent issues of RNJ (Vol.4, No.1 and Vol.4, No.2) concerning the *kai-kai* (cat's cradle) string figures of Rapa Nui, brought back to my memory the fact that Baeza had also been interested in these. According to descriptions I heard, he had a notebook or album in which he had mounted the figures and recorded the accompanying chants. What happened to this album after his death is possibly one more Easter Island mystery. It would be interesting to compare this collection from the 1950s with that recorded by Blixen in the 70s.

The first of the islanders who were sent to study in continental Chile, several of whom were to eventually become teachers themselves, were sponsored and recommended by Baeza. In this era before air travel, this meant years of separation from family and few chances even to associate with other islanders. Foster homes had to be found for the children, usually with other teachers, during the years of study, covering the equivalent of junior and senior high school, and (at least) junior college for professional training. Several of the leaders of the present Rapanui community including several former mayors, and the current governor, received their education as teachers, and perhaps their impetus toward higher education due to the initial influence of this teacher. At some point the authorities recognized his contribution by naming the island school "Escuela Publica Lorenzo Baeza."

Some twenty years after the tragedy at Anakena, one of the children who had been there dictated his recollections in his native language for a linguistic class at the University of Wyoming. The following is my rather free translation of his story (Rapa Nui text available on request).

The Accident at Anakena, 1955

"In that year when 'Kontiki' came here to Easter Island, all of the school children went on a *paseoto* Anakena. 'Kontiki' did this as a treat for the schoolchildren to celebrate the end of the school year, by taking them on his ship in which he came to Easter Island. I also was on board this ship, my age was six years. We all stayed at Anakena, we went swimming, we ate food cooked in the *umu*, we played until evening (sunset). When it was time to leave there was an argument between the teacher Lorenzo Baeza and the nuns. He took the children and began to load them on to the boats to carry them out to the ship for returning them to Hangaroa. Because he was angry he didn't pay attention to the small size of the boat. He just loaded the children into the boat to finish taking them out to the ship in order to hurry and return to Hangaroa. In the third boat during the carrying of the children out to the ship, the accident took place. During this third trip the boat sank loaded with children and also this teacher. At this time I had already gone on board the

ship. I was in the second boat load. When the third boat began to sink, the children who knew how to swim spread out but the children who didn't know how, were taken by this teacher. He had them hold on to the sides of the boat which was floating but filled with water. In the end there were two children who died, one boy cousin of mine and one older girl. So also the professor. He died because of exhaustion, from saving the children who did not know how to swim. If I had gone in the third boat, I might have died also, because I didn't know how to swim."

It must be recalled that, in 1955 as still in 1960, islanders needed special permission from the governor to go to Anakena or anywhere which would involve crossing or entering the sheep ranch which took up most of the land on the island. Then also there was no transport available except for horses. So many of the young children had little or no opportunity to learn to swim. My informant and the drowned boy both lived in the interior. The other victim, though older, probably did not swim because girls did not swim in those days, nor did most adult women.

Notes:

- [1] There are several discrepancies between Bill's version of the story and those later published (in Heyerdahl's *Aku-Aku*, Chapter 5) and in eye-witness accounts I heard later. Heyerdahl gives the number of school children as 115 rather than 70.
- [2] All other versions agree the launch was returning to the ship from shore, not coming to shore from the ship.
- [3] The non-islanders seem convinced all the native children could swim 'like fish' but in their own words several of my informants deny this.

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We regret that, due to increased cost of postage and printing, it is necessary to increase the subscription rate for RNJ. Rates are now \$20 year (US, first class mail) and \$30 (foreign, airmail).

Our Readers Respond.....

Experiencing Geographic Names*

Names, at first, are incorporated through their sound body into the experience area of people. Thus, Wimbledon may be looked for somewhere in the English language sphere. A sports fan knows more: in 1877 the first tennis championships took place here.

As for Moruroa, some people may have never heard of it and might identify it as African; others will define it correctly as Polynesian. A Greenpeace member does know more: Moruroa is the name of the French nuclear base in the Tuamotu group, French Polynesia (mistakenly called "Mururoa" by the French army).

In the beginning, "names are just sound and smoke", as Goethe has put it. It is through a pamphlet by Greenpeace, for example, or a book (e.g., Bengt Danielsson and Marie-Thérèse Danielsson, *Poisoned Reign* 1987, Penguin) that people get more knowledge. Not only information but also emotional components are added to the sound body so that in the actual case a person may associate nuclear bombs and blood cancer (and not palm trees and lagoons) with Moruroa.

W. Wilfried Schuhmacher, Denmark

*to Dr. Bengt Danielsson on his 70th birthday.

Dear Editor,

Thank you for forwarding to me a note from Emily Mulloy accompanied by a copy of William Mulloy's perceptive article in *Américas* magazine (Vol.26, No. 4, April 1974), which in many ways anticipated my piece "Rapa Nui and the Population Explosion" in *RNJ* (Vol.4(2), Summer 1990).

I never had the privilege of meeting Bill Mulloy, but would want to tell him that it is a pleasure to yield to his depth of understanding not only of Rapa Nui but also of its place, and deserved place, in the ebb and flow of world affairs and human crises.

The Mulloy article speaks as none of us can speak on behalf of the current efforts of the Easter Island Foundation to establish the Mulloy Research Library. The Library will serve the ends of bringing together the world's knowledge of that tiny isle which speaks from stone, hosting research whose value Mulloy's article so eloquently proves, and serving to bind the present-day Rapa Nui to each other and to the planet now struggling as they did, an "ambitious and vigorous society that tried and came within a hair's breath of failure."

We must be grateful to Emily Mulloy for bringing to our attention her late husband's fine article. May I suggest that you consider sharing it with your readers? Dr. Malcolm A. Clark, Malibu, California.

[Editor's Note: Mulloy's paper will appear in the summer issue of *RNJ*.]

Responses continued.....**Pre-Inca Ayllu and Easter Island's "Middle Period"**

José Miguel Ramirez, in his "Mapuche Connection (RNJ 4,4:53-55), also refers to the "very interesting simultaneous analog-homolog...called *minga* in Mapuche, *umanga* in Rapanui and *mink'a* in Quecha (p.53); I think this listing needs some clarification.

In pre-Inca time, before being conquered by the Inca to become integrated into the Four Quarters of the Earth, the mode of production of the Andean tribes had mainly been based upon tuber (such as *kumara*) cultivation within the *ayllu*, a local rural community as residence of a kindred group. There was common property, and also the work was cooperative, ruled by reciprocal economic assistance among the inhabitants--called *minga* --in carrying out their agricultural tasks. Labor was however not only used for the reproduction of their own existence and that of weak members of the community, but also for the reproduction of the community *per se*. This additional work was used to cultivate the fields of the *curaca*, the *ayllu* chief. To this surplus-work carried out by the community members has to be added warfare as well as the cult of the ancestors (*kamak*) and the local deities and the care of graves (such as *chullpa*, circular burying towers) and the altars (*huaca*).

I have earlier postulated that this pre-Inca *ayllu* formation, exemplifying what Maurice Godelier has called "une formation économique et sociale" has been transferred to Easter Island being reflected by its "Middle Period" (Schuhmacher 1990). According to Heyerdahl, the catastrophes following in the wake of the major ENSO (El Niño/Southern Oscillation) event of 1280 would have lead to the emigration to Easter Island. With the exception of *huaca*--Rapanui (RAP) *ahu* (from Proto-Polynesian **afu* "to pile up, heap up"), not only the thing but also the word would be the same. (To the analysis in Schuhmacher 1990, the following addition has to be made: *kamak* "creator", cf. Proto-Quechua **maki* "hand, arm"--RAP Makemake.)

As for *mink'a*, Ecuadorian Quechua *minga* (Mapuche *minga* would therefore be a borrowing from Quechua) --RAP (obsolete) *umunga* (Fuentes), *umanga* (Englert). The Andean form has Amerind cognates; cf. Algonquin *mi* "hand, give": Kwakiutl *maxwa* (simplified) "give potlatch"--suggesting that Andean *minga* is related to the potlatch of the Indians of the Northwest Coast. The parallel is obvious, viz. exchange of labor and exchange of value objects; even in potlatch it could happen that value objects and labor (or land) was exchanged.

The *minga* custom therefore is of Amerind origin--and must have come to Easter Island together with the pre-Inca *ayllu* transfer. (As I am not monopolized by the "Heyerdahl School", I shall present at the Austronesian Linguistics Conference in Honolulu a paper entitled "A Papuan Element in the Rapanui Vocabulary?")

W. Wilfried Schuhmacher

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An Uncommon Guide to Easter Island is still available!
 This unique guide to Rapa Nui and its archaeological sites contains maps, drawings, 110 full color photos, references, glossary and index. Written by Georgia Lee, Ph.D., the Guide is available from International Resources, P.O.Box 840, Arroyo Grande CA 93421-0840.
 Price is \$18.95 plus shipping. ISBN 0-937480-17-7. "



EASTER ISLAND FOUNDATION NEWS.....

The Sociedad de Amigos de Isla de Pascua, originally formed in 1948 by Dr. Roberto Gajardo, has been reactivated and is currently involved in several projects to benefit the island. The President of the Sociedad, Chilean industrialist Carlos Cardoen, has invited the Easter Island Foundation to build the Mulloy Research Library as part of a larger Cultural Center that the Sociedad and the Municipalidad will be constructing. Fundacion Cardoen has pledged substantial funds for building supplies, and the Municipalidad-- under the direction of Mayor Juan Edmunds-- has agreed to supply labor and local building materials for the Library.

Plans for the groundbreaking ceremony for the Mulloy Research Library are moving ahead, with the festivities scheduled for October 1991. The ceremony will coincide with the arrival of the Society Expedition Cruise "Project Polynesian Migration."

The Library facility, which will be constructed near Tahai, will house the extensive library of Bill Mulloy, a portion of the library of Kenneth Emory, plus field notes and photographic collections of many others who have worked on the island. The Library will also contain recently published books and journals for future researchers to use. Equipment will include microfilm and microfiche readers, VCRs, a copy machine and computer word/ processor.

Envisioned as an active research center, the Library will be available to the numerous visiting scholars as well as interested laypersons. It will also serve as a visible symbol for

the *rapanui* of the importance of their Polynesian heritage to the scholarly community. The EIF project will create jobs on the island, sponsor a publication series, and eventually provide scholarships for *rapanui* students. The Easter Island Foundation's permanent fundraising activities will provide an endowment for future income, salaries, book purchases, etc. The Library will be needing equipment, also. Your gifts are tax deductible! Want more information? Contact Dr. Joan Seaver, EIF, Box 1319, Pacific Palisades, CA 90272.

.....
The Mulloy Research Library, Easter Island Foundation needs your assistance. You can help them-- and yourselves-- by ordering this elegant 3 color EIF Tee shirt! It is available for a \$20 (or more) donation to the EIF, Box 1319, Pacific Palisades, CA 90272. Sizes: M, L, XL.



What's New in Hangaroa.....

* In the Summer 1990 issue of RNJ (Vol.4, No.2) we reported that the first 50 meters of Te Pito te Henua street had been paved. We regret that this rumor is not only in error, but is so far from the actual condition of the street as to be laughable. As of the end of February, the entire street from the church to the caleta is a nightmare of rain gutters under construction, curbs under construction, piles of dirt and debris, cement mixers, etc., and is virtually impassable. Interlocking bricks are being fabricated on the island for the projected paving of this street, which may or may not occur in our lifetime.

* The Good News is that efforts toward the biological control of flies are working. The fly population is dramatically down from previous years due to the introduction of dung beetles and a type of wasp that feeds on fly larvae (See RNJ 1989, Vol.3(2): pg.9). Now for the ant population that makes picnicking at Anakena a trial by ordeal....

* The palm trees at Anakena are being affected by an insect, *Aspidiotus destructor*, which is protected by the copious ant population. Another insect, *Cosmopolites sordidus*, is killing banana trees by boring into the trunks. It is hoped that biological control will be introduced this year by INIA, the Chilean Institute of Agricultural Investigations, to combat this pest.

* One island family has brought in a small herd of goats and sheep.

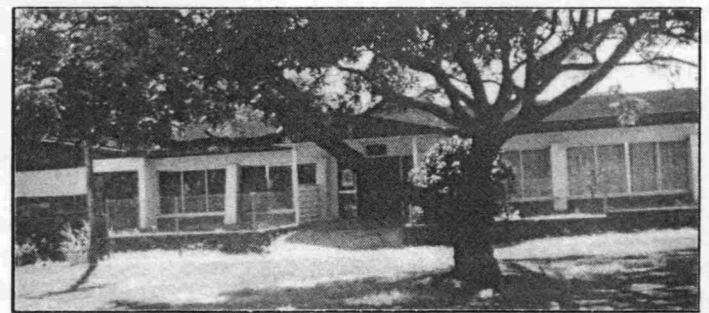
* An airplane full of 40 llamas--alive and kicking-- on their way to New Zealand landed at Mataveru Airport, proving the

old saying that, if you live long enough on Rapa Nui, sooner or later you see everything.

* The survey begun by Mulloy and continued by the University of Chile has now surveyed 80% of the island and recorded 36,000 structures of all kinds.

* At long last, the school books in *rapanui* are published. This is a project that has occupied Bob and Nancy Weber since 1976. Working with the Universidad Católica de Valparaíso and the Summer Institute of Linguistics, they have written six charmingly illustrated textbooks in *rapanui*. An additional text is a guide for teachers, and one gives the translations in Castellano. The books (containing approximately 800 pages) are written in the *rapanui* language and include stories about life on the island, descriptions of life on other Polynesian islands, legends, activities, exercises, grammar, vocabulary, etc. Congratulations to the Webers for this important contribution. Further information about the new books can be obtained by writing Bob and Nancy Weber, Correo, Isla de Pascua.

* The public library ("Rongo Rongo") on the corner of Policarpo Toro and Te Pito te Henua is now completed and operational.



The Island's New Public Library

* An 18th century carving of a *kavakava* figure was recently sold at auction by Christie's (England); the buyer is a collector in Europe. The seller, whose godmother had received it as a gift, expected it to be described as a souvenir worth a few pounds. However, it sold for £49,500 pounds (US \$95,000.). A finely carved Marquesan war club was sold for £33,000 (US \$63,000.), a record price for a club from Oceania.

* Professor Jean Dausset (the 1980 Nobel prize winner in the group that did the HLA blood-group work) reports that a Japanese company, Fujisawa, is producing an experimental drug known as FK506 that seems to be an immune-suppressor; the product is from a Japanese mushroom that is also a native of Easter Island. It is said to be more efficient for organ transplants than existing immune-suppressors. This macrolid has been named *Rapamycin*, and it is being studied in several laboratories.

WHAT'S NEW IN POLYNESIA.....

* The January 1991 issue of *Tok Blong SPPF* (415-620 View St., Victoria BC, Canada V8W 1J6) contains a special report on the problem of AIDS in the South Pacific. Education is

slowing the spread of HIV infection in Australia and New Zealand but elsewhere there is a marked lack of resources for educational programs. More than 70 cases of HIV infection (including those living or dead with AIDS) have been identified in French Polynesia. High risk groups, such as gay communities, urgently need educational programs. However many countries are reluctant to admit that sexually transmitted diseases--let alone HIV--might be present for reasons of tourism or Christian image.

* A South Pacific conference on AIDS was held last year at the University of the South Pacific (Suva, Fiji). Speakers ranged from those urging women to take an active role against the spread of AIDS to diatribes by a Bishop who is opposed to the use of condoms because they contribute to the "permissive society."

* The World Health Organization and Australia will host an Asian-Pacific AIDS conference in Canberra next August, and an information center for AIDS prevention will be set up in Noumea by the South Pacific Commission in cooperation with WHO. It will serve all the Pacific countries by providing news and information, health education, small grants, etc. Further information can be obtained by writing The Secretary General, South Pacific Commission, BPD5, Noumea Cedex, New Caledonia.

* **Riva Riva : Por la Salud de la Isla y Sus Habitantes** is the title of an interesting booklet distributed on the island by Jan Correa. To date, three issues have appeared beginning in July 1989. Jan hopes to resume publication this year, keeping the price within the means of the average islander. He plans to reduce the current price of 400 pesos to 100 pesos if he can afford to do so. These illustrated (xeroxed) booklets contain information on cultivation, kinds of crops, biological control of pests (instead of pesticides), recipes, medicinal plants, nutrition, and a host of ideas on everything from composting to recycling to raising chickens. Each booklet contains a small packet of local seeds from Jan's own garden for islanders to experiment with. Jan has studied ecological engineering systems in New Zealand and Australia and has years of experience with gardening and forestry. For further information, write (English or Spanish) to Jan Correa, Correo, Isla de Pascua.

Tapati Rapa Nui.....

The week-long festival that is held yearly on Rapa Nui was on schedule this year, from February 2-9. Those who have never attended one of these celebrations of Rapa Nui culture are advised to run, not walk, to the nearest tour agency and book a flight for next year's *Tapati*.

The programs included: an inaugural ceremony during which the candidates for queen were introduced and then the audience was treated to a program of traditional folklore dances; an excellent art exhibit that mostly featured local woodcarvings; a soccer game for seniors; a fisherman's boat race; *haka pe'i*, which is an ancient contest that consists of sliding down the steep slopes of Maunga o Pu'i on banana

trunks; programs of song and dance nearly every night (and followed by general dancing to cassettes); an agricultural exhibit; seashell gathering contest; eel snaring competition; statuette carving; shell necklace making competition; exhibition of cat's cradle (*kai-kai*); body painting; a fishing championship; a pentathlon; swimming contests; target throwing with ancient obsidian weapons; a rooster chase; a parade; horse races; songwriting competition; and finally, the coronation of the 1991 queen.

To describe all of these events would fill the entire issue of RNJ, so only a few highlights will be mentioned. One of these must be the *haka pe'i*, a death-defying contest that involved a terrifying ride down an impossibly steep and grassy mountainside while clinging to banana trunks lashed together. Contestants were given points on everything from their body paint and costumes to the speed they achieved (estimated to be 50 miles an hour). Needless to say, accidents occurred when the unstable sleds hit bumps and disintegrated, or when the rider was thrown in one direction and the banana trunks in another. After several severe injuries, the mayor halted the contest before all the contestants had participated.

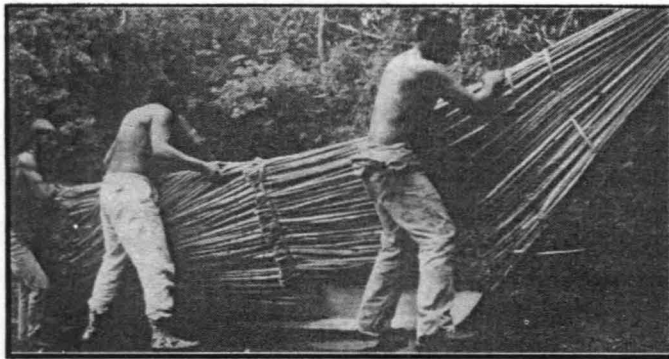
A boat competition that involved small reed floats as well as the addition of *totoro* reeds to regular fishing canoes was great fun. Paddling (and/or being towed) from Hanga Piko to the Caleta, three converted fishing boats each carried a queen candidate and her supporters who came into the bay singing and chanting. The canoes were decorated with all sorts of vegetation and carried painted islanders who continued their chanting and singing performances on land.



Decorated canoe arriving at the Caleta

The fact that the canoes were clearly influenced by Heyerdahl's fixation on reed canoes à la Lake Titicaca and bore no resemblance to authentic Polynesian canoes seemed to pass unnoticed by islanders and undoubtedly in a few years these spurious water craft will have firmly entered the folklore of the island and tourists will be told, "yes, that is the way they were. . . ."

The parade turned out to be the Mardi Gras of the Pacific; wearing marvelously creative home-made costumes and props, islanders marched several blocks through the village streets, ending up at the gym where a dance was held. During the parade, the crowd sang, danced and chanted in support of their particular queen candidate.



Islanders attached *totoro* reeds to fishing boats for Tapati festival event, attempting to simulate Peruvian watercraft.

The Tapati dance performances were spectacular. Some of the programs were so professional they could have been out of Las Vegas. Of particular interest were the performances of *kai-kai* that were observed with intense concentration by the audience-- which broke into enthusiastic cheers for well-done chants and expert string figures. What is special about the Tapati de Rapa Nui is that these performances are not done for tourists--rather, they are for themselves, their peer group, and their families. This fact puts them into a wholly different frame of reference.

The only sour note in the entire week-long series of events was the fact that nothing (but nothing) began on time. But, that is the charm of Polynesia, I am told. Programs scheduled for 10:00 p.m. finally started at 11:00--or later. A certain amount of patience is involved, but the ensuing show is worth the wait.

Of the three queen candidates, Maria de Rapa Nui Haoa and Lorie Rapu were running neck and neck throughout the week; Lorie won by only 15 votes. Because the winning margin was so small, a recount was held amongst dark mutterings of some sort of skullduggery. However, Lorie hung onto the crown.



Festival Queen Lorie Rapu (on left) and 1st runner up, Maria de Rapa Nui Haoa.

* In conjunction with the Tapati de Rapa Nui festivities occurring on the island, the Museo Sociedad Fonck in Viña del Mar presented a month-long exhibit, *Arte y Cultura Rapa Nui*. The exhibits included both photographs and artifacts, as well as the excellent decorated *tapa* cape which is the showpiece of their collection.

FAR HORIZONS TOURS

The Rapa Nui Festival, Easter Island

In early February of each year, *rapanui* celebrate their annual festival, a combination of dance, song, parade, feats of bravery and skill, and downright fun. Dressed in Polynesian costumes, they perform centuries-old dances of their ancestors, *kai-kai* (string figures), and reenact ancient contests such as *haka pe'i* (sliding down the mountain on banana stems).

Far Horizons proudly presents a trip that includes one week on Easter Island during the time of the festival. The trip will be led by archaeologist Georgia Lee, Ph.D.

Departure: 3 February 1992, returning 13 February (optional trip extension to northern Chile is available). Easter Island portion of trip: \$2795. Airfare, approx. \$1800. Group limited to 15 participants. For further information, contact Far Horizons, P.O. Box 1529, San Anselmo, California 94960; (415) 457-4575.

International Meeting.....

"LAVAS AND VOLCANIC TUFFS"

A. Elena Charola, Ph. D.

The International Meeting on Lavas and Volcanic Tuffs was inaugurated at the Biblioteca Nacional in Santiago de Chile, on October 25th, 1990. During the ceremony, the awards for the Competition called by the Dirección Nacional de Bibliotecas, Archivos y Museos, through its Centro Nacional de Restauración, were given out to the winners. The awards, which ranged from covering the airfare Europe-Easter Island and lodging (first prize), to Santiago-Easter Island airfare and lodging (third prize), were given to:

(First prize): M. Laurenzi Tabasso, A.M. Mecchi and U. Santamaria; Istituto Centrale per il Restauro, Roma, Italy, for their contribution "Interaction between Volcanic Tuff and Products used for Consolidation and Waterproofing Treatment."

(Second prize ex-aequo): J. Vouvé, J. Arouze, G. Lacazedieu, Ph. Malaurent, P. Vidal and F. Vouvé; Centre d'Hydrogéologie, Université de Bordeaux, France, for their contribution "Field and Laboratory Study of Deterioration Phenomena of Lavas and Volcanic Tuffs under Subtropical and Temperate Climates by Multisequential Methodology."

(Second prize ex-aequo): P.L. Bianchetti*, G. Lombardi, S. Marini and C. Meucci*; *Istituto Central per il Restauro, Roma, Italy, and Dip. Scienza della Terra, Università di Roma, Rome, Italy, for their contribution "The Volcanic Rocks of the Monuments of the Forum and Palatine (Rome): Characterization, Alterations, Results of Chemical Treatments."

(Second prize ex-aequo): B. Fitzner; Geologisches Institut, RWTH Aachen, Germany, for his contribution

"Volcanic Tuffs. The Description and Quantitative Recording of their Weathering State."

(Third prize): J. Sramek* and T. Nishiura; *State Institute for Restoration, Prague, Czechoslovakia and Tokyo National Research Institute of Cultural Properties, Japan, for their contribution "Assessment of Conservation Efficiency of Volcanic Tuffs Treatments by Radioactive Labelling."

The following day all 23 participants to the Meeting (plus two accompanying persons) travelled to Easter Island. The Meeting on the Island followed the schedule summarized below: Sat. 27, day-long field trip; Sun. 28, morning field trip, afternoon session; Mon. 29, morning field trip, afternoon closed session; Tues. 30, morning closed session, afternoon closing session. Wed. 31, return to Santiago.

The participants were divided into 5 working groups, each of which was co-ordinated by a member of the Scientific Committee and one of the awardees. Each of these interdisciplinary groups worked on its own during the field trips. Some of the sites visited had been chosen for special study so that the discussions during the first session were based on these sites as exemplifying the major deterioration and conservation problems on the Island.

The closed sessions served the purpose of elaborating the ideas that arose during the brain-storming of the first session and the drafting of the final document. This document contains the conclusions reached during the Meeting and recommendations for future actions.

The final document can be summarized as follows:

Observations

- the stone used for the carving of the *moai* is extremely heterogeneous. Its characteristics vary extensively with the location from which it was taken in the quarry.
- the climate conditions favour weathering directly (due to the heavy and frequent rains and the strong winds) and indirectly (through the development of lichens, algae and other biological organisms).
- the present human activity has a negative effect on the conservation of this lithic heritage. This is mainly due to the unrestrained movement of tourists, their actions and those of accompanying persons, the direct and indirect action of free-roaming cattle, and the fires of grasslands.

Conclusions

- the archaeological heritage of Easter Island, composed by the well-known monumental statues (*moai*), the petroglyphs, the ceremonial and dwelling centers, and the rock paintings, represents a unique cultural heritage, both for the Rapa Nui community and for the whole world.
- this heritage is in a critical conservation state due to the progressive deterioration of the stone. The conservation problem is compounded by the fact that this heritage is made up of approximately a thousand *moai*, three hundred *ahu* (ceremonial platforms), and many other archaeological

artifacts distributed over thousands of sites on the 166 square kilometers of the Island.

--the safeguarding of this heritage needs immediate action. The urgency arises from the serious and progressive nature of the deterioration affecting the lithic material and the extensiveness of the conservation problem.

In view of the above-mentioned observations and conclusions, and on the basis of the studies already carried out, a comprehensive plan of actions was elaborated. This plan outlines the basic studies, the *in-situ* testing and the complementary action that are needed to develop a co-ordinated conservation program.

Considering the need for immediate action, the following specific recommendations were made: (main ones listed)

Recommendations

- moving of at least one *moai* into the local Museum to assure its preservation.
- construction of temporary shelters to cover specific sites.
- hydrophobization of the best preserved *moai*.
- design of perimetric protection structures, which also might serve as observation points, for the petroglyphs carved on the rock outcrops called *papa*.
- development of training courses for teachers at the local school and high school, park rangers and tour guides.

The Meeting was closed with a public conference held at the Municipality of the Island by Dr. A. Elena Charola.

Ana Kai Tangata Workshop.....

The Workshop on the rock art of Ana Kai Tangata was held at the Biblioteca Nacional in Santiago de Chile.

The participants were: Maria Eugenia van der Maele (Centro Nacional de Restauración), Mónica Bahamondez (Centro Nacional de Restauración), Miguel Cervellino (Museo Nacional de Atacama), Teodoro Fernandez (architect), Magdalena Krebs (Centro Nacional de Restauración), Patricia Vargas (Instituto de Estudios de Isla de Pascua); Claudio Cristino (Instituto de Estudios de Isla de Pascua); Carlos Weber (CONAF), Angel Cabeza (CONAF), Pierre Vidal (Laboratoire de Recherches des Monuments Historiques), Jean Vouvé (Université Bordeaux), and A. Elena Charola (World Monuments Fund). The conclusions that resulted from that Workshop can be summarized as follows:

- The rock paintings are not deteriorating at a measurable rate at the present time.
- The site needs a better management plan and adequate support for its protection.

Recommendations were made regarding continuation of the studies in course (archaeological, climatological, hydro-chemical, etc.) On the basis of these conclusions and recommendations the Centro Nacional de Restauración is elaborating a program that considers all these points within a priority schedule.

RAPA NUI AND THE POLYNESIAN CULTURAL CENTER.....

Word has been received from Sergio Rapu (former Governor of Rapa Nui and pre-eminent Rapa Nui archaeologist), that the world's most comprehensive and authentic Rapa Nui exhibit outside of Easter Island is being planned for early 1992 at the Polynesian Culture Center, a highly popular cultural theme park facility.

The Polynesian Culture Center on the Hawaiian island of Oahu encompasses 29 acres and includes seven re-created Polynesian villages representing Hawaii, Samoa, Tahiti, Marquesas, Tonga, New Zealand (Maori) and Fiji. The Center has hosted over 16 million visitors since 1963. To ensure the highest level of cultural authenticity, the Center has hired Sergio Rapu to oversee this project. Rapu is working closely with the Chilean government and Rapanui officials. More importantly, he is hoping to have the Cultural Center purchase as many as 100,000 *moai* miniature carvings to be sold on its grounds over a five-year period. "This will provide the first true export outlet for Rapanui carvers," said Rapu, adding that the Polynesian Cultural Center exhibit and carvings will motivate visitors to come to Easter Island to see and experience it for themselves.

Rapu noted that a committee headed by the island's museum curator and a group of Ancianos will be formed to check and maintain the quality of the carvings and will provide an authentic seal of approval on all exported items.

COMING ATTRACTIONS

- * **Nicknames and what they mean** by Grant McCall
- * **¿Podrá Sobrevivir el Idioma Rapa Nui?** by Robert Weber and Nancy Thiesen de Weber
- * **Astronomical Orientations in Polynesia** by William Liller
- * **24 Years of Tourism** by Hanns Ebensten
- * **Contemplate the Navel of the World** by William Mulloy (a reprint of his famous paper that originally appeared in *Américas Magazine*, 1974)

RAPA NUI JOURNAL

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Spring 1991

Project Polynesian Migration

A once-in-a-lifetime cruise leaving from Tahiti
September 28, 1991 on Society Expeditions'
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Join us as we sail the bounding main and visit a chain of exotic islands: Raivavae, Rapa, Marotiri, Mangareva, Pitcairn, Henderson, Ducie....and landing at Rapa Nui just in time for the EIF's groundbreaking ceremony for the Mulloy Research Library. Dr. Joan Seaver and Edmundo Edwards will be among the lecturers for the voyage and 10% of each Rapanuiphile's fare will be donated to the Easter Island Foundation.

Write EIF, Box 1319, Pacific Palisades, CA 90272, for further information.

Georgia Lee, Ph. D. Publisher and Editor

Rapa Nui Journal is an international journal published quarterly for the benefit of those interested in Easter Island and Polynesia. Papers reflect the views of the contributors and are not necessarily those of the editor. Correspondence, articles, photographs, reviews of books and films, announcements of conferences and publications, and all related materials are invited. We cannot be responsible for unsolicited items or anything submitted without adequate return postage or international reply coupon. If possible send submissions on floppy disk with IBM-ASCII format.

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